

REMARKS

We trust that the Examiner will now find the application in condition for allowance and reconsideration is respectfully requested. Claims 2, 15 and 16 have been cancelled without prejudice or disclaimer. In addition, claims 1 and 17 have been amended in response to the Examiner's objections. A marked-up version of the amended claims is included in a section attached hereto. In the marked-up claims, the underlined words are being added, which places the amended claims into the form given above. The attached section is captioned **VERSION WITH MARKINGS TO SHOW CHANGES MADE.**

In the Office Action, claims 1-16, 18 and 19 of the present application were rejected under 35 USC 103(a) as being unpatentable over the combination of Yang et al. (U.S. Patent No. 6,055,063) and Aiello, Jr. et al. (U.S. Patent No. 6,337,745). Claims 2, 15 and 16 have been cancelled without prejudice or disclaimer. In regard to the other pending claims of the application, claim 1 has been amended to recite a print system comprising a terminal that generates original data; a printer controller that converts the original data into print data; and a printer that performs print operations for forming an image on a recording medium based on the print data, wherein the printer comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction, wherein the printer controller is connected between the terminal and the printer, wherein the printer comprises a condition detector that detects a condition of the print operations and transmitting means for transmitting condition data indicating the condition of the print operations to at least one of the terminal and the printer controller, wherein the condition detector detects a number of printed lines which have been printed by the print head as the condition of the print operations; at least one of the terminal and the printer controller comprises receiving means for receiving the condition data; and at least one of the terminal and the printer controller comprises notifying means for notifying the user of progress of the print operations based on the condition data. A feature of the pending claim is that a condition detector provided to a printer detects a condition of printing operations. At least one of a terminal and a printer controller

receives detection data from the condition detector and notifies a user of the progress of printing operations based on the received detection data.

An additional feature of the pending claim is that the print head of the printer forms an image on a line basis on the recording medium while scanning in a predetermined direction. That is, during the printing, the movement of the print head relative to the recording medium is repeatedly performed and stopped in alternation. During a printing operation, there is a danger of trouble occurring in this moving operation. However, according to pending claim 1, a number of printed lines is detected as the condition of the printing operations, so a user is notified of the occurrence of such trouble in real time, enabling the user to deal with the trouble readily. This is greatly advantageous.

In regard to the Yang reference, the Office Action states that the printer (160) of the cited reference is provided with a condition detector since the printer (160) shown in Figure 1 of the reference outputs "Response" to the server (124). However, there is no disclosure in the cited reference as to what the "Response" indicates. That is, there is no disclosure that a "Response" from the printer (160) indicates the condition of print operations. The printer (160) could output a "Response" even if the printer is not provided with the condition detector. Because of the mere disclosure of a "Response" in the Yang reference, the cited reference neither teaches nor suggests that the printer (160) is provided with a condition detector.

In addition, the Office Action states that the server of Aiello reference receives a detection result from a printer and notifies a user of the received detection result. Although the server (52) of the Aiello reference (See Figure 5) displays information relating to the printer (62) on the GUI (130), there is no disclosure in the cited reference as to where the information comes from. The information could come from different sources. For example, as disclosed in the "Related Art" section of the present specification, it is possible for a controller to detect progress of printing operations based on the amount of print data transmitted to a printer, without receiving any information from the printer. Therefore, displaying printer information on the CUI (130) of the server (52) does not mean that the information is received from the printer.

In addition to the teachings described for the Yang and Aiello references in regard to amended claim 1, claim 6 of the present application recites a printing system with a notifying means that notifies a user of the progress of print operations based on condition data and the total amount of the print data. In contrast to the present application, the Aiello reference discloses a monitor displaying a start and an end time of job, a number of printed pages, and related information. (See Figure 25) However, there is no disclosure in the cited reference that this information is displayed based on condition data and the total amount of the print data. As such, it would not be obvious to one skilled in the art to combine the Aiello reference with the Yang reference to produce the print system with notifying means of claim 6 of the present application.

In addition to the teachings described for the cited references in regard to amended claim 1, claim 11 of the present application recites a printer system wherein the condition detector of the printer comprises a raster counter that counts a printed raster number. In contrast to the present application, neither the Yang nor the Aiello references disclose means for counting a printing raster number. For example, the server (52) of the Aiello reference displays information relating to the printer (62) on the GUI (130). (See Figure 5) However, such information could be obtained based on the amount of data transmitted to the printer. (Please refer to the "Related Art" section of the present specification) That is, displaying printer information on the GUI (130) does not mean a raster counter is provided. As such, it would not be obvious to one skilled in the art to combine the Aiello reference with the Yang reference to produce the print system with raster counter of claim 11 of the present application.

In addition to the teachings described for the Yang and Aiello references in regard to amended claim 1, claim 13 of the present application recites a printing system in which the notifying means audibly notifies the user of the progress of the print operations using a synthesized voice. In contrast to the present application, there is no disclosure in the Aiello reference of this feature. As such, it would not be obvious to one skilled in the art to combine the cited references to produce the print system with audible notification of claim 13 of the present application.

As a result of the teachings described above for the Yang and Aiello references, it would not be obvious to one skilled in the art to combine the references to produce the print system of amended claim 1 and claims 6, 11 and 13 of the present application. Claims 2-5, 7-10, 12 and 14, which depend on amended claim 1, also would not be obvious to one skilled in the art in view of the cited references.

In regard to claim 18 of the present application, the Office Action rejects claim 18 for the similar reasons as for rejecting claim 1 of the present application. In addition to the teachings of the cited references described for claim 1, neither the Yang nor the Aiello reference discloses a means for counting a printing raster number as recited by claim 18 of the present application. For example, the server (52) of the Aiello reference displays information relating to the printer (62) on the GUI (130). (See Figure 5) However, such information could be obtained based on the amount of data transmitted to the printer. (Please refer to the "Related Art" section of the present specification) That is, displaying printer information on the GUI (130) does not mean a raster counter is provided. As such, it would not be obvious to one skilled in the art to combine the Aiello reference with the Yang reference to produce the print system with raster counter of claim 18 of the present application.

In addition to the teachings described for the Yang and Aiello references in regard to claim 18, claim 19 of the present application recites a printing system in which the raster counter is provided to the printer. Because neither of the cited references discloses a means for counting a printing raster number, it is apparent that no raster counter is provided to a printer of the cited references. As such, it would not be obvious to one skilled in the art to combine the Aiello reference with the Yang reference to produce the print system with raster counter of claim 19 of the present application.

In the Office Action, claim 17 of the present application was rejected under 35 USC 103(a) as being unpatentable over the combination of Yang et. al (U.S. Patent No. 6,055,063) and Onaga (U.S. Patent No. 5,862,404). In response claim 17 has been amended to recite a printer connected to a printer controller that converts original data received from a terminal into print data, the printer comprising a print unit that performs print operations based on the print data for forming an image on a recording medium wherein the print unit comprises a print head that forms an image on a line basis on the recording

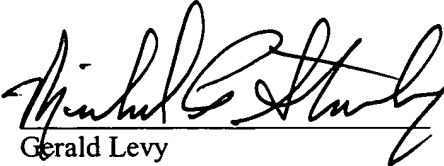
medium while scanning in a predetermined direction; a detector that detects a progress of the print operations wherein the detector detects a number of printed lines which have been printed by the print head as the condition of the print operations; and transmitting means for transmitting progress data indicating the conditions of the print operations to the printer controller. A feature of the pending claim is that a detector provided to a print unit detects the progress of printing operations. A transmitting means transmits the progress data to a printer controller.

An additional feature of the pending claim is that the print head of the print unit forms an image on a line basis on the recording medium while scanning in a predetermined direction. That is, during the printing, the movement of the print head relative to the recording medium is repeatedly performed and stopped in alternation. During a printing operation, there is a danger of trouble occurring in this moving operation. However, according to pending claim 17, a number of printed lines is detected as the condition of the printing operations, and so a user is notified of the occurrence of such trouble in real time, enabling the user to deal with the trouble readily.

In regard to the Onaga reference, the Office Action states that the printer (110) of the cited reference detects and provides the condition of the print operations (205 in Figure 2) to the print controller (120 in Figure 2). However, the cited reference does not disclose a printer in which a number of printed lines is detected as the condition of the printing operations. The reference describes a "device status file" in regard to the printer (110). (Col. 4, lines 41-52) Similar to the teachings described above for the Yang reference in regard to amended claim 1, there is no disclosure in the cited reference as to what the "device status file" indicates. That is, there is no disclosure that "device status file" from the printer (110) indicates the condition of print operations. Because of the mere disclosure of "device status file" in the Onaga reference, the cited reference neither teaches nor suggests that the printer of claim 17 is provided with a detector that detects and provides the condition of the print operations to the print controller. As a result, it would not be obvious to one skilled in the art to combine the Yang and Onaga references to produce the printer of claim 17 of the present application.

In view of the above, it is respectfully submitted that the claims as herein are patentably distinguishable over the prior art and the application is now believed to be in condition for allowance.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A print system comprising:

a terminal that generates original data;

a printer controller that converts the original data into print data; and

a printer that performs print operations for forming an image on a recording medium based on the print data, wherein the printer comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction,

wherein the printer controller is connected between the terminal and the printer,

wherein the printer comprises a condition detector that detects a condition of the print operations and transmitting means for transmitting condition data indicating the condition of the print operations to at least one of the terminal and the printer controller, wherein the condition detector detects a number of printed lines which have been printed by the print head as the condition of the print operations;

at least one of the terminal and the printer controller comprises receiving means for receiving the condition data; and

at least one of the terminal and the printer controller comprises notifying means for notifying the user of progress of the print operations based on the condition data.

17. (Amended) A printer connected to a printer controller that converts original data received from a terminal into print data, the printer comprising:

a print unit that performs print operations based on the print data for forming an image on a recording medium wherein the print unit comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction;

a detector that detects a progress of the print operations wherein the detector detects a number of printed lines which have been printed by the print head as the condition of the print operations; and

transmitting means for transmitting progress data indicating the conditions of the print operations to the printer controller.